# White-tailed Deer in Indiana's State Parks: has the control program worked and what is it's future

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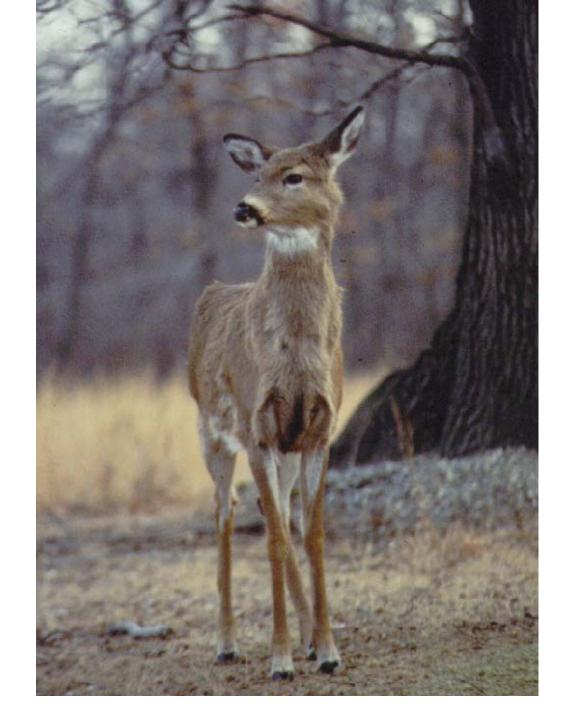
#### Brown County State Park 1992

Brown County State Park deer waiting for handout





White-tailed deer in poor condition due to habitat condition



# Sample site in Brown County State Park and Yellowwood State Forest showing difference in understory plants, 1993

**Brown County State Park** 



#### **Yellowwood State Forest**



# Exclosure placed in burned area in BCSP in 1988--picture taken in 1993



### **Brown County State Park Exclosure 1993**





#### INDIANA STATE PARKS

and expanded	to addditiona	ıl parks fr	om 1995	to 2000		
Habitat damage	e was used to	initiate o	deer redu	ction in	each pa	rk
Removal of wh	ite-tailed dee	r from Inc	diana state	e parks		
Year	Number	of parks		lumbar	of Deer	
	Number	oi paiks			OI DEEI	
1993	1			392		
1994	0					
1995	4			1422		
1996	7			1907		
1997	10			2430		
1998	9			1534		
1999	11			1599		
2000	15			1697		
2001	13			1483		
	-					
Seventeen parl	ks have had t	wo or mo	ore years	of redu	ction	
Five parks have						

						ons lev						11	
	Brown Co		Charlestown				Potato Creek				Versailles		_
Year		#/SqM	R/E	#/Sq M	R/E	#/Sq M	R/E	#/Sq M	R/E#/Sq I		M R/E#/Sq		İ
1993	0.84	15.9											
1995	0.61	21.4	0.25	11.6		69.1	1.26	58.3					
1996	0.35	24.1	0.39	29.6	1.01	98.7	0.89	79.0					
1997	0.22	12.3	0.24	15.9			0.51	43.7	1.15	59.8	0.69		
1998			0.21	13.1	0.75	68.6	0.27	22.7	0.32	30.9	0.29		
1999	0.27	13.9			0.51	45.5			0.12	4.2	0.19	16.5	
2000			0.35	26.5	0.45	38.6	0.3	21.7	0.41	35.9			
2001	0.22	9.9	0.21	14.0	0.43	38.1			0.27	22.0	0.31	25.7	
	McCormick C		Pokagon		Lincoln		Ind Dunes		Tippecanoe F		Whitewater		
	R/E#/SqM		R/E #/Sq M F		R/E	R/E#/Sq M		R/E#/Sq M				#/Sq M	i
1996	0.62	55.2	1.33	66.3	0.46	44.1							
1997	0.32	24.5	0.47	21.9	0.38	27.6			1.23	117.8	0.94	105.5	
1998							0.67	59.0			0.4	42.4	
1999	0.36	27.6	0.34	18.7			0.4	34.3	0.79	76.9			
2000	0.22	14.7	0.41	39.6	0.35	27.6	0.38	29.9	0.49	45.1	0.55	58.9	
2001			0.17	12.3	0.38	24.6	0.2	15.5	0.27	24.1	0.33	34.8	
	Chain'o'Lake		Clifty Falls		Spring Mill		Shakamac		Turkey Run		Parks not h		nuntec
	R/E	#/Sq M	R/E	#/Sq M	R/E	#/Sq M	R/E	#/Sq M	R/E	#/Sq M	i		
1998	0.9	80.4	0.42	51.2				-		•	Ft.	Harrisc	n
1999					0.43	35.0	0.52	41.6	0.49	38.9	Мо	unds	
2000	0.56	52.0	0.4	47.0	0.2	10.7	0.23	16.4	0.35	25.7	Ou	bache	
2001	0.48	42.0	0.17	32.4					0.28	18.0	Prophetstown		own
Note: F	Remova		Shades		9 and f	rom Cli	ftv Fall	s (all ve				mmit La	

### **Brown County 2001**



#### **Brown County 1993**



#### **Brown County 2001**



Vegetative growth outside exclosure is now 4 to 6 feet in height

Most parks now have 20x20meter exclosures to monitor recovery of habitat

Recommended program for maintaining white-tailed deer within the habitat carrying capacity of state parks and nature reserves

- •As the program moves into the maintenance phase and park habitat recovers, it is important to establish a procedure for the long-term maintenance of deer populations within the capacity of their habitat. Vegetative condition will not be a good indicator of deer number in the maintenance phase.
- •Data on the number of deer removed from parks is correlated with the number of deer remaining within each park and with recovery of habitat. Parks that have had several years of reduction, have removals approaching 0.20 R/E (reduction per effort) and 12-16 deer/square mile of park habitat. Habitat is recovering in these parks.
- •Deer have a great capacity to expand their population without repeated control and can double their population in two years without control. Therefore, parks should have a reduction at least every other year.
- •Therefore, the recommended program is to use the data collected for each park on deer removed in a given year to determine whether a park needs another reduction the following year. Any park in which the R/E exceeds 0.22 or the number of deer removed/ square mile of park habitat exceeds 16 should have a reduction the following year. Parks not having a deer reduction in a given year would have a reduction the following year.
- Habitat recovery should be monitored though periodic assessment of vegetative condition, approximately every 3 to five years,.

Current	status o	f parks and re	commende	d parks for deer	reduction	during f	all, 2002
Park		Year of	R/E	#/Sq M	i	Remova	 al
		Last Removal		moq m	•	in 2002	
<b>Brown County</b>		2001	0.22	9	.9	No	
Charles	town	2001	0.21	1	14	No	
Indiana	Dunes	2001	0.2	15	.5	No	
Pokago	n	2001	0.17	12	.3	No	
McCorn	nickCree	2000	0.22	14	.7	Yes	
Spring I	Mill	2000	0.2	10	.7	Yes	
Shakan	nac	2000	0.23	16	.4	Yes	
Potato (	Creek	2000	0.3	21	.7	Yes	
Chain'o	'Lakes	2001	0.48	4	12	Yes	
Clifty Fa	alls	2001	0.17	32	.4	Yes	
Harmon	nie	2001	0.43	38	.1	Yes	
Lincoln		2001	0.38	24	.6	Yes	
Shades		2001	0.27	2	22	Yes	
Tippeca	noe Rive	2001	0.27	24	.1	Yes	
Turkey	Run	2001	0.28	1	18	Yes	
Versaille	es	2001	0.31	25	.7	Yes	
Whitewater		2001	0.33	34	.8	Yes	
Ft. Harri	ison	Some damag	e occurring	should have a	deer reduc	tion in 2	002
		or 2003					
Oubach	e	Damage pres	entshould	d have a deer red	duction in 2	2002	
Prophet	tstown			ssreduction p			en com
	s & Sumn		_	e evaluation			